

## OS11: Microfluidics and Microphysiological Modeling

November 7, 2023

EX-4-A

- OS11-1      **1D Elastic Model of the Hepatic Blood Circulation (*Invited*)**  
10:40-11:10    Aimee M. Torres Rojas, Sylvie Lorente (Villanova University, USA)
- OS11-2      **Simulation Of Sea Urchin Sperm Rheotaxis**  
11:10-11:25    Rintaro Takagi, Toshihiro Omori, Takuji Ishikawa (Tohoku University, Japan)
- OS11-3      **Effective Viscosity Estimation Using Resultant Wave of Wall Shear Stress Distribution in Plane Poiseuille Suspension Flow**  
11:25-11:40    Misa Kawaguchi (Tokyo University of Agriculture and Technology, Japan), Tomohiro Fukui (Kyoto Institute of Technology, Japan), Kenichi Funamoto (Tohoku University, Japan)
- OS11-4      **Numerical Simulation of Swimming Microorganisms in a Maxwellian Fluid**  
11:40-11:55    Kaoru Koitabashi, Toshihiro Omori, Takuji Ishikawa (Tohoku University, Japan)
- OS11-5      **Twisted Fiber Microfluidics: A Cutting-Edge Approach to 3D Spiral Devices**  
11:55-12:10    Shunsuke Kato (Tohoku University, Japan), Daniel W. Carlson, Amy Q. Shen (Okinawa Institute of Science and Technology, Japan), Yuanyuan Guo (Tohoku University, Japan)
- OS11-6      **A Microfluidic Device to Mimic Hypoxic Tumor Angiogenesis toward Breast Cancer Spheroid**  
13:10-13:25    Yuta Iijima (Tokyo University of Agriculture and Technology, Japan), Gen Hayase (National Institute for Materials Science, Japan), Kenichi Funamoto (Tohoku University, Japan), Daisuke Yoshino (Tokyo University of Agriculture and Technology, Japan)
- OS11-7      **Usefulness of the Human Blood-Brain Barrier on a Chip for Brain-Targeting Drug Development**  
13:25-13:40    Masanori Tachikawa, Moemi Hidaka, Yuka Sakamaki (Tokushima University, Japan), Kenichi Funamoto (Tohoku University, Japan), Mai Inagaki (Tokushima University, Japan)
- OS11-8      **Spatial Gradient of Fluid Shear Stress Prolongs Nuclear Translocation of Nuclear Factor- $\kappa$ B**  
13:40-13:55    Makoto Sasaki, Kenichi Funamoto (Tohoku University, Japan), Daisuke Yoshino (Tokyo University of Agriculture and Technology, Japan)
- OS11-9      **A Numerical Study on the Effects of Mechanical Stimulation and Endothelium Recovery Rate on Vascular Remodeling after Percutaneous Coronary Intervention**  
13:55-14:10    Bao Guo, Shiliang Chen, Yu Zhang, Yujia Yang, Aike Qiao (Beijing University of Technology, China)

- OS11-10      **Adhesion Modulates Cell Migration and Endothelial Cell Dynamics**  
14:10-14:25      Rui D. M. Travasso, Marcos Gouveia, Matilde Palmeira, Ângela Calhau, Juliana Curty, Susana Cunha, João Carvalho (University of Coimbra, Portugal), Maurício Moreira-Soares (University of Oslo, Norway), José Rafael Bordin (Federal University of Pelotas, Brazil), Catarina S. Lopes, Filomena A. Carvalho (Universidade de Lisboa, Portugal), A. Hernández-Machado (Universitat de Barcelona, Spain), Koji Kinoshita (University of Southern Denmark, Denmark), Nuno C. Santos (Universidade de Lisboa, Portugal)
- OS11-11      **Experimental Study on Electrohydrodynamic Instability of Three Immiscible Liquids Flowing in a Microchannel**  
14:25-14:40      Eda Nur Soysal, Kerem Uguz (Boğaziçi University, Turkey)